

## REMARKS

Reconsideration and allowance are respectfully requested in view of the following remarks.

By this amendment, claims 1 and 4 are amended. No new matter has been added. Accordingly, claims 1-76 are pending in the present application.

### **Allowable Subject Matter**

It is acknowledged in the Office Action that claims 4-13 are allowed, and that claims 14-59 contain allowable subject matter.

Applicant submits that any base claims or intervening claims of claims 14-59 are believed to be patentable for reasons explained below. Therefore, rewriting claims 14-59 into independent form is believed to be unnecessary at this time.

### **Claim Rejections Under 35 U.S.C. § 103**

Claims 1, 2, 69 and 70 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Yu (U.S. Patent No. 5,790,055, hereinafter "Yu") in view of Liang (U.S. Patent Application Publication No. 20020173335, hereinafter "Liang"). This rejection is traversed as follows.

Claim 1 has been amended to recite an encoding and input method of world characters, comprising: *inter alia*,

for each category of world characters, allocating basic elements forming the character of this category or capable of determining the character of this category to the corresponding number keys on the numerical pad, a code of said each basic element is uniquely determined by area code and position code for the number key

at which the basic element is located, wherein the area code of the basic element is the number of the key to which the basic element is mapped, and the position code of the basic element is the position number in the numerical keys to which the basic element is mapped.

Applicant's Fig. 5 illustrates an example of distribution of basic elements including the initial consonants and finals of PinYin in areas 0-9. To enter the PinYin of "han" using the keypad illustrated in Applicant's Fig. 5, the area code of the initial consonant "h" is 6, and its position code is 1. Accordingly, the area and position codes of the initial consonant "h" are 61. The area code of the final "an" is 6, and its area and position codes are 63. As such, the PinYin of "han" is encoded as 61(h), 63(an). See Applicant's published specification (Publication No. 20060248459): paragraph 0183. It is submitted that the present invention is not limited to the above-described examples.

Yu does not disclose the above-recited features of claim 1. Yu discloses a method of encoding Chinese and Japanese ideographic characters by categorizing the geometrical strokes utilized to form ideographic characters into ten stroke family types and assigning a distinct number ranging between 0-9, to each of the ten stroke types, as illustrated in Fig. 8 of the reference. According to the Yu's method, the stroke formations at four strategic locations, the two upper corners and the two lower-side edges, on the periphery of a character in a "Z" sequence are read to obtain a four-digit Frame code for the character, as illustrated in Fig. 3 of the reference. Referring to Fig. 3, the Frame code is defined by reading the stroke formations of the character at the four locations of the characters in the sequence of TOP-LEFT, TOP-RIGHT, BOTTOM-LEFT EDGE and, BOTTOM-RIGHT EDGE. Yu

further discloses selecting a particular block; and reading the stroke formations at four strategic locations of the selected ID block of the character in a "Z" sequence to obtain a four-digit ID code. See Yu: Fig. 4. In Fig. 4 of Yu, the Frame code is the stroke formations of the ideographic character at positions in the sequence of TOP-LEFT, TOP-RIGHT, BOTTOM-LEFT EDGE and, BOTTOM-RIGHT EDGE. The ID code is the stroke formations of a selected block, in this case the bottom right block, of the ideographic character at positions in the sequence of TOP-LEFT, TOP-RIGHT, BOTTOM-LEFT EDGE and, BOTTOM-RIGHT EDGE.

In Yu, the Frame code represents the stroke formation of the overall ideographic character, and the ID code represents the stroke formation of a selected block of the ideographic character. The ID code in Yu is not the position number in the numerical keys to which a basic element of the character is mapped. As such, the ID code and Frame code in Yu do not have the relationship between Applicant's claimed area code and position code.

Yu discloses assigning ten Geostrokes used to input Chinese or Japanese character to numeric digits 0-9. See Yu: Fig. 8. Each of the Geostrokes is specified by a single numeric digit. Even though Fig. 8 of Yu illustrates that some of the numeric digits are associated with two Geostrokes, Yu does not disclose that a position code (e.g., 1 or 2) is used to specify which of the two Geostrokes is being input by the user.

In view of the foregoing, Yu does not disclose an encoding and input method of world characters, comprising "for each category of world characters, allocating basic elements forming the character of this category or capable of determining the character of this category to the corresponding number keys on the numerical pad, a

code of said each basic element is uniquely determined by area code and position code for the number key at which the basic element is located, wherein the area code of the basic element is the number of the key to which the basic element is mapped, and the position code of the basic element is the position number in the numerical keys to which the basic element is mapped," as recited in claim 1.

(emphasis added)

Liang is relied upon as allegedly disclosing a space key arranged proximal to the numerical key pad. Even though Liang discloses a plurality of two digit numeric codes representing characters or character strings, Liang does not disclose that one of the two digits represents number of the numerical key to which a character is mapped, or that the other one of the two digits represents the position number in the numerical keys. Therefore, Liang fails to remedy the deficiencies of the Yu reference.

In view of the foregoing, claim 1 is patentable. Claims 2, 69 and 70 are patentable at least because of their dependency from claim 1.

Claims 3 and 74 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Yu, in view of Liang, and further in view of Tse-Kai (U.S. Patent No. 4,868,913, hereinafter "Tse-Kai").

Claim 61 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Yu, in view of Liang, and further in view of Chang et al. (U.S. Patent No. 6,389,166, hereinafter "Chang").

Claim 62 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Yu, in view of Liang, and further in view of Chang, and further in view of Tse-Kai.

Claim 63 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Yu, in view of Liang.

Claim 64 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Yu, in view of Liang, and further in view of Chang, and further in view of Hon et al. (U.S. Patent No. 6,490,563, hereinafter "Hon").

Claim 65 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Yu, in view of Liang, and further in view of Chang, and further in view of Zhang et al. (U.S. Patent No. 5,197,810, hereinafter "Zhang"), and further in view of Hon.

Claims 66-68, 75 and 76 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Yu, in view of Liang, and further in view of Leung (U.S. Patent No. 6,922,811, hereinafter "Leung").

Claims 71-73 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Yu, in view of Liang, and further in view of Geschwinde et al. (PostgreSQL Developer's Handbook, hereinafter "Geschwinde").

None of the additional references cited remedies the deficiencies of the Yu and the Liang references. Therefore, claims 3, 61-68, and 71-76 are patentable.

The Office Action does not indicate whether claim 60 is allowed, or rejected. Applicant submits that claim 60 is patentable at least because of its dependency to claim 30.

### **CONCLUSION**

From the foregoing, further and favorable action in the form of a Notice of Allowance is respectfully requested and such action is earnestly solicited.

In the event that there are any questions concerning this amendment, or the application in general, the Examiner is respectfully requested to telephone the undersigned so that prosecution of present application may be expedited.

Respectfully submitted,

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